Attorney Docket No. 47121-5015-00-US
U.S. Appln. No. 10/543,169
Response to Final Office Action dated December 28, 2009

LISTING OF CLAIMS

- 1. (Cancelled)
- 2. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the power of the mining actuator connected to the separate hydraulic circuit is arranged to be adjusted by adjusting the hydraulic pressure generated by the hydraulic pump comprised by the separate hydraulic circuit.
- 3. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the power of the mining actuator connected to the separate hydraulic circuit is arranged to be adjusted by adjusting the hydraulic flow generated by the hydraulic pump comprised by the separate hydraulic circuit.
- 4. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the mining actuator is selected from the group consisting of: a percussion device arranged to generate impact pulses in the tool connected to the mining equipment; a rotation device arranged to rotate the tool connected to the mining actuator relative to its axis; and a feed device arranged to push the tool connected to the mining actuator in the axial direction.
- 5. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the mining actuator is a percussion device, the percussion device is connected to a first separate hydraulic circuit having a percussion device-specific first hydraulic pump, and the power of the percussion device is arranged to be adjusted by adjusting said hydraulic pump.

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6. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the

hydraulic system comprises a plurality of mining actuators that each mining actuator is

connected to a dedicated separate hydraulic circuit, and the power of each mining actuator is

arranged to be adjusted by acting on the hydraulic pump comprised by said separate hydraulic

circuit.

7. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the

hydraulic pump of each separate hydraulic circuit is arranged to be driven by a dedicated power

unit and the hydraulic power acting in each separate hydraulic circuit is arranged to be adjusted

by acting on the speed of rotation of the hydraulic pump by means of the power unit.

8. (Previously Presented) A hydraulic system as claimed in claim 26, wherein at least

one separate hydraulic circuit comprises a pressure fluid tank separate from the other hydraulic

circuits, the pressure fluid of said separate hydraulic circuit being arranged separate from the

pressure fluids of the other hydraulic circuits.

9. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the

hydraulic system comprises a plurality of separate hydraulic circuits, and the separate hydraulic

circuits have a common pressure fluid tank separate from the main hydraulic circuit the common

pressure fluid used in the separate hydraulic circuits being arranged separate from the pressure

fluid of the main hydraulic circuit.

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10. (Previously Presented) A hydraulic system as claimed in claim 26, wherein the hydraulic power acting in the separate hydraulic circuit is arranged to be adjusted by changing the displacement capacity of the hydraulic pump comprised by said separate hydraulic circuit.

Claims 11 - 25 (Canceled).

26. (Previously Presented) A hydraulic system for mining equipment, comprising:

at least one hydraulic circuit with pressure fluid channels and at least one
hydraulic pump, the hydraulic pump being arranged to generate hydraulic power in the hydraulic circuit;

at least one power unit for driving the hydraulic pump;

at least one hydraulic mining actuator connected to the hydraulic circuit and configured to act on a tool in the mining equipment;

at least one hydraulic auxiliary actuator connected to the hydraulic circuit; and means for adjusting the hydraulic power to be led to the mining actuator and the auxiliary actuator connected to the hydraulic circuit, wherein

the hydraulic system comprises a main hydraulic circuit and at least one separate hydraulic circuit, and the main hydraulic circuit and each separate hydraulic circuit are operationally separate from each other, each having a separate hydraulic pump for generating hydraulic power; at least one mining actuator is connected to the separate hydraulic circuit and said mining actuator is configured to be driven by the hydraulic power acting in the separate hydraulic circuit; and

the power of the mining actuator connected to the separate hydraulic circuit is arranged to be adjusted by adjusting the generated hydraulic power by adjusting pumping output of the hydraulic pump of the separate hydraulic circuit, wherein

the hydraulic pump of the separate hydraulic circuit is controlled by means of a control unit including an adjustment strategy,

the pressure of the fluid channel leading from the pump to the mining actuator of the rock drilling machine is monitored by means of a sensor,

the information on the pressure obtained from the sensor is transmitted to the control unit,

the information on the volume flow obtained from the hydraulic pump of the separate hydraulic circuit is monitored,

and the power of the mining actuator of the rock drilling machine is controlled according to the pressure and flow information and the adjustment strategy.